

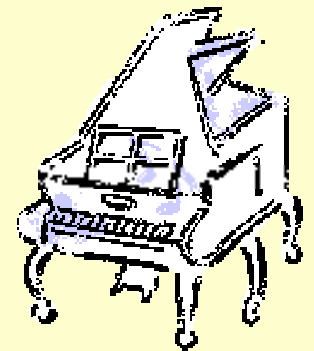
# OPERATIONS AND MAINTENANCE FOR HEALTHY HIGH PERFORMANCE SCHOOLS

IAQ Symposium – October 27 & 28, 2003

PRESENTED BY: Dr. Nancy Myers

The Myers Group

E-mail [info@themyersgrouponline.com](mailto:info@themyersgrouponline.com)



# FUN FACTS TO KNOW AND SHARE

## Match the Answer with the Fact

Scorecard 58,000

30-50

10 Million

\$550 Million

48

0

Amount provided annually for the federal Fund for the Improvement of Education (FIE), of which the new Healthy Schools program is included

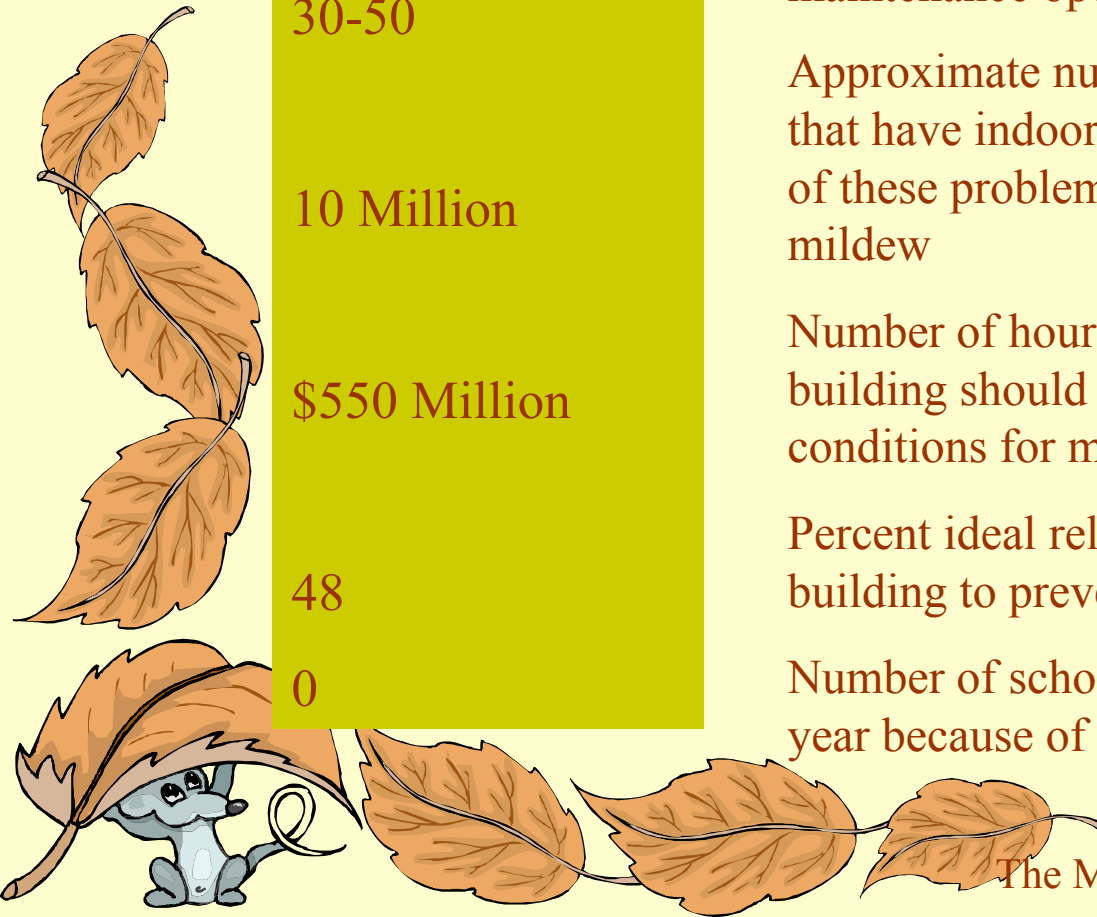
Number of states that require/legislate ongoing maintenance operations for school facilities

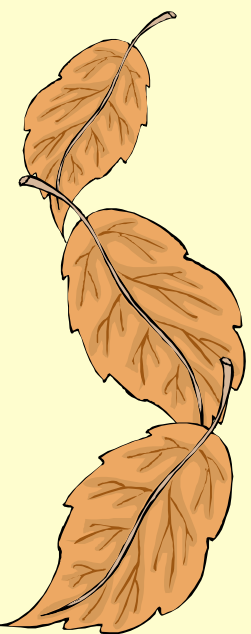
Approximate number of public and private schools that have indoor air quality problems- more than half of these problems have been linked to mold and mildew

Number of hours that wet or damp spots in a school building should be cleaned or dried within before conditions for mold growth become ideal

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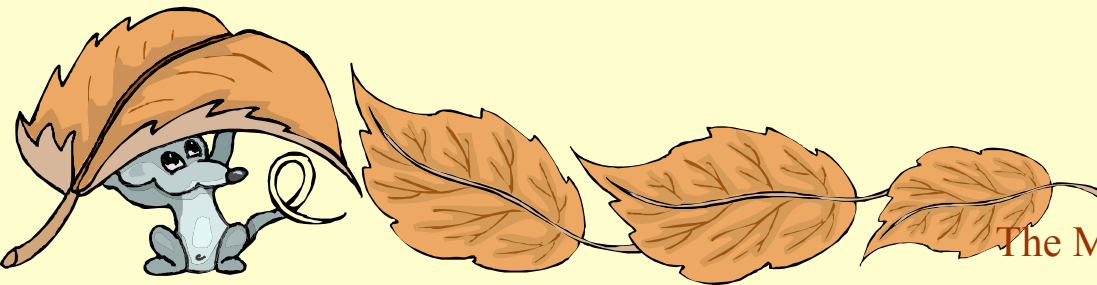
Number of school days American students miss each year because of asthma





“School buildings are a tool in the enterprise called learning, and, like any tool, they can help or hurt the enterprise. We can’t control all the influences that affect a child’s learning. We must take each child as he or she comes to us. But we can control the kinds of learning facilities to which we send our young.” Dena G. Stoner, President, National Education Knowledge Industry Association

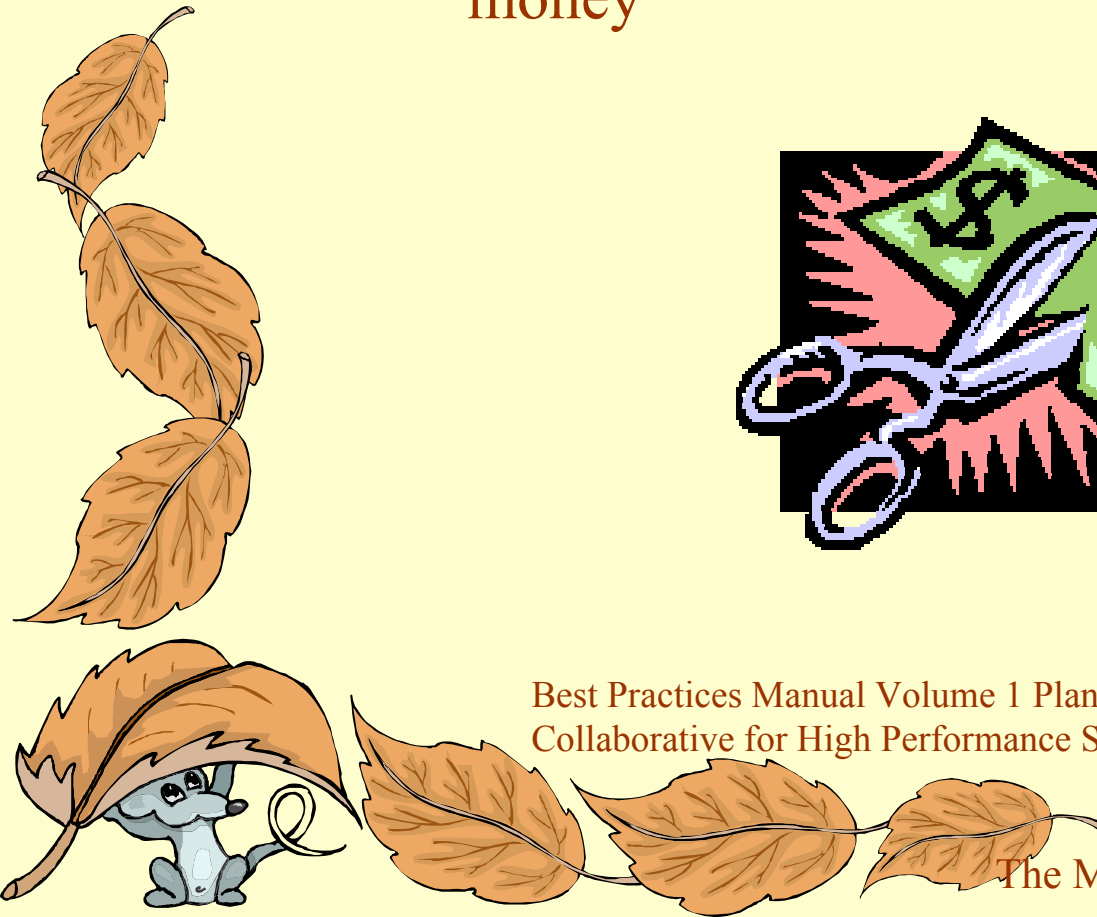
California’s School Facilities Predicament, April 1998, Report Ed Source



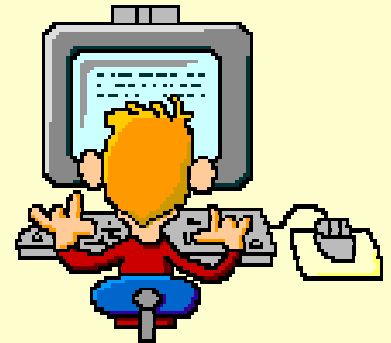
High performance schools are facilities that improve the learning environment while saving energy, resources, and money



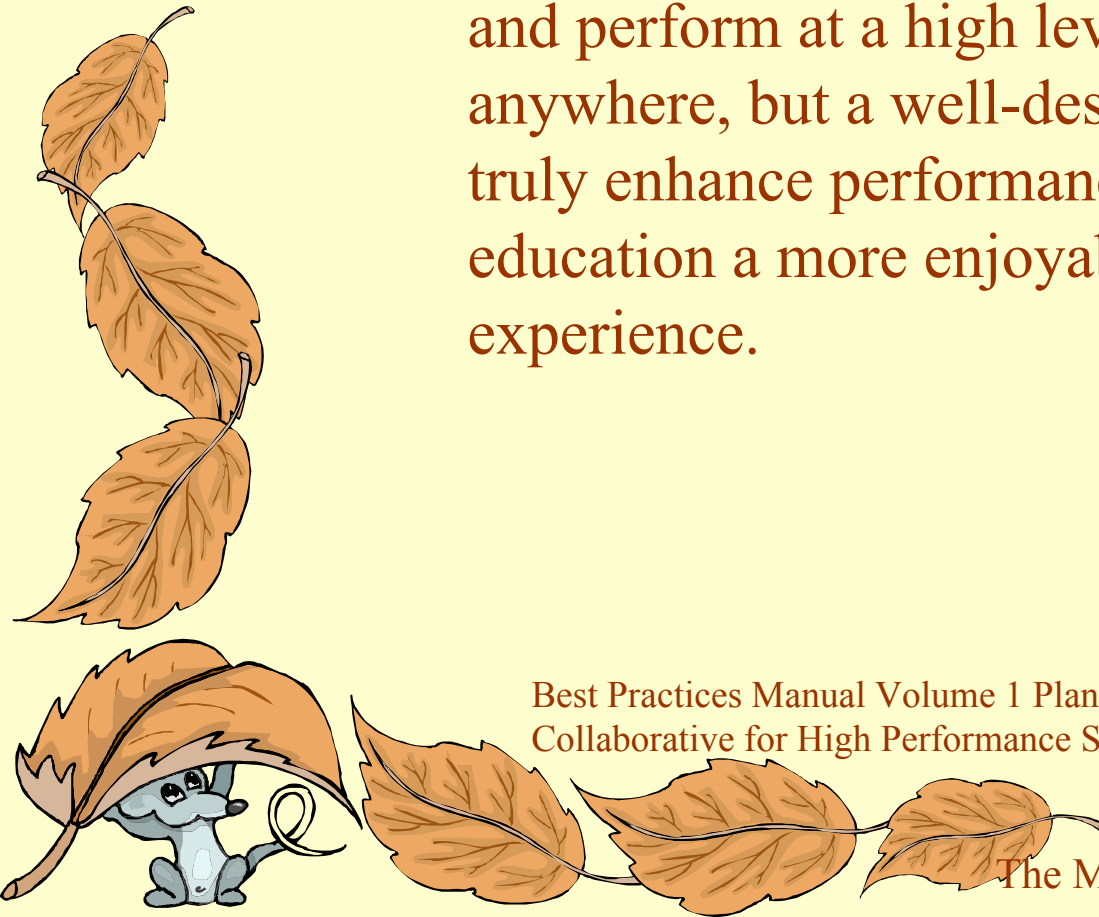
Best Practices Manual Volume 1 Planning 2002 Edition, The Collaborative for High Performance Schools



“High performance school” refers to the physical facility – the school building and its grounds. Good teachers and motivated students can overcome inadequate facilities and perform at a high level almost anywhere, but a well-designed facility can truly enhance performance and make education a more enjoyable and rewarding experience.



Best Practices Manual Volume 1 Planning 2002 Edition, The Collaborative for High Performance Schools



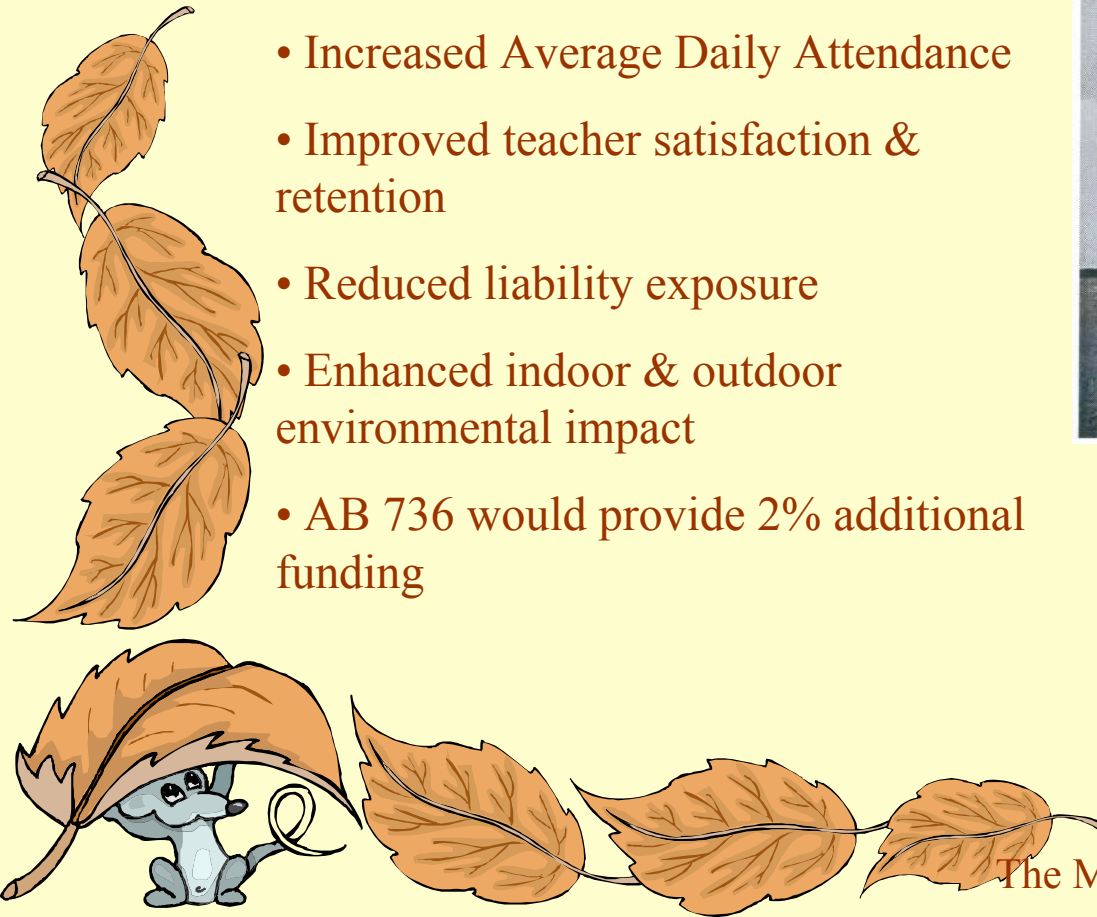
# BENEFITS OF HIGH PERFORMANCE SCHOOLS

- Heightened student performance
- Reduced operating costs
- Better student & teacher health
- Increased Average Daily Attendance
- Improved teacher satisfaction & retention
- Reduced liability exposure
- Enhanced indoor & outdoor environmental impact
- AB 736 would provide 2% additional funding



Georgina Blach School – Los Altos, CA Daylighting provides an excellent source of illumination.

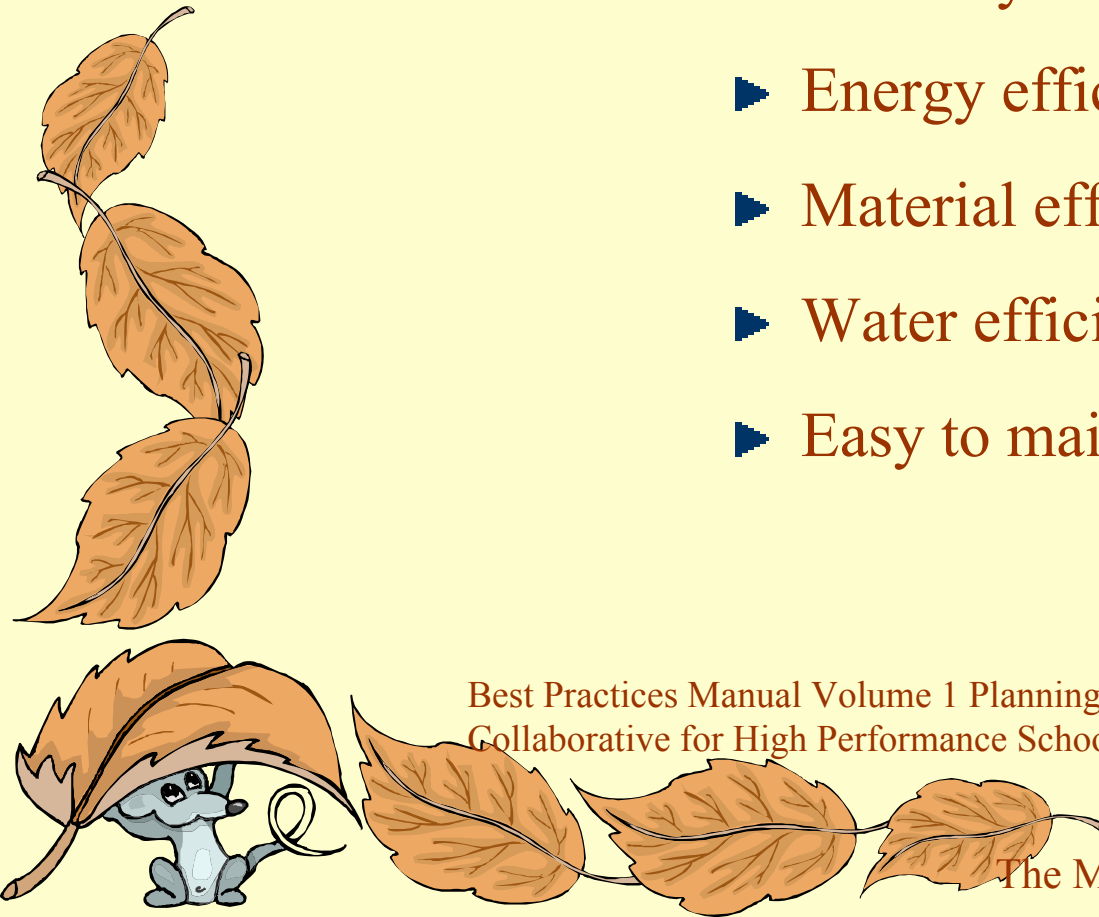
Photo by: Chris Duncan, AIA





# A High Performance School is:

- ▶ Healthy
- ▶ Thermally, visually, and acoustically comfortable
- ▶ Energy efficient
- ▶ Material efficient
- ▶ Water efficient
- ▶ Easy to maintain and operate



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# A High Performance School is:

- ▶ Commissioned
- ▶ An environmentally responsive site
- ▶ A teaching tool
- ▶ Safe and secure
- ▶ A community resource
- ▶ Stimulating architecture

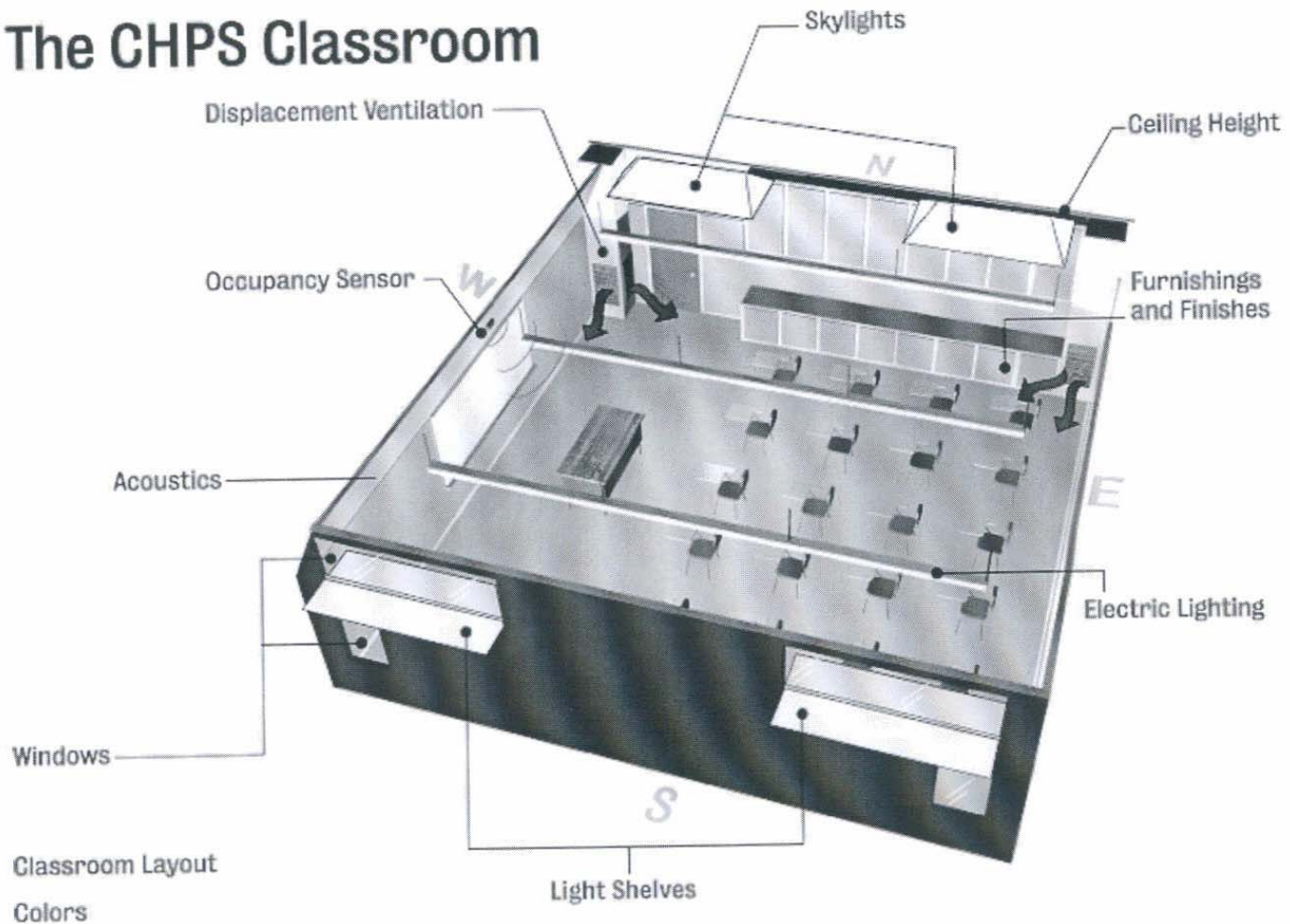


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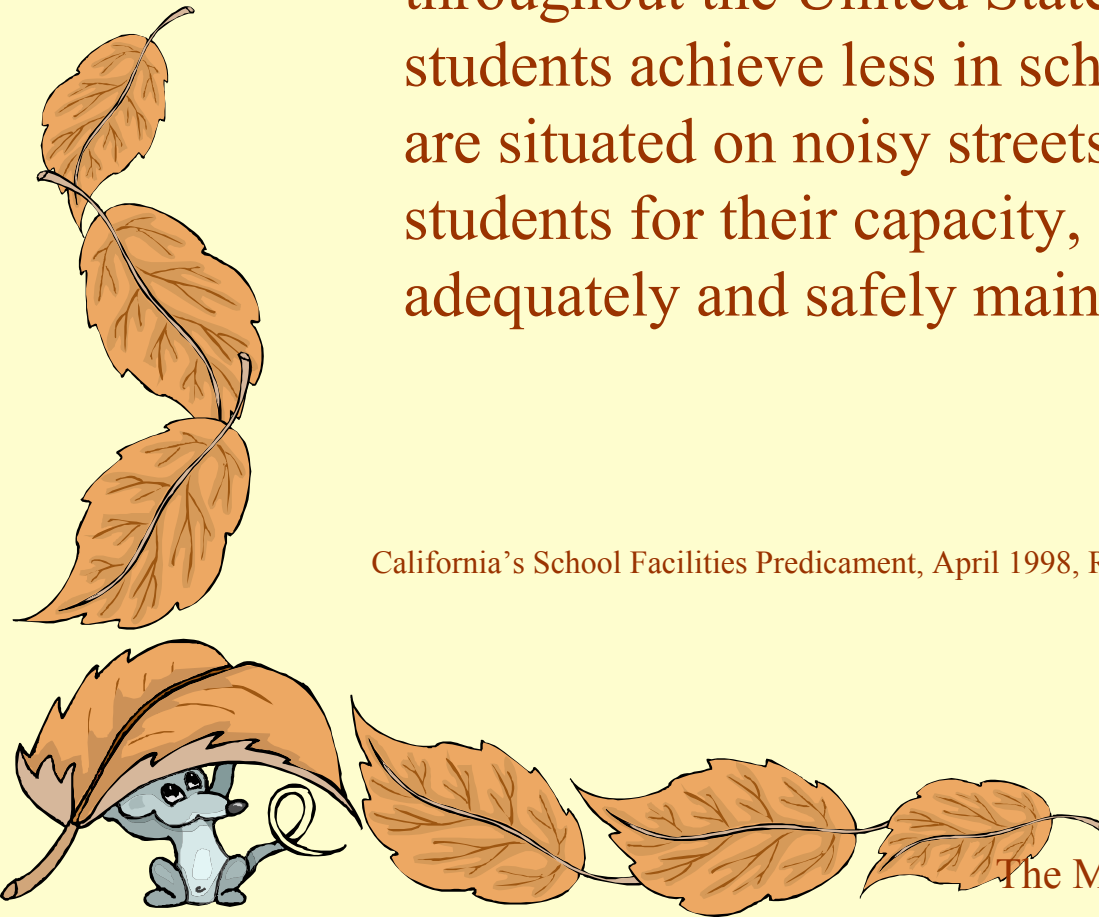


# The CHPS Classroom



A variety of studies conducted since 1982 throughout the United States indicate that students achieve less in school buildings which are situated on noisy streets, have too many students for their capacity, or cannot be adequately and safely maintained.

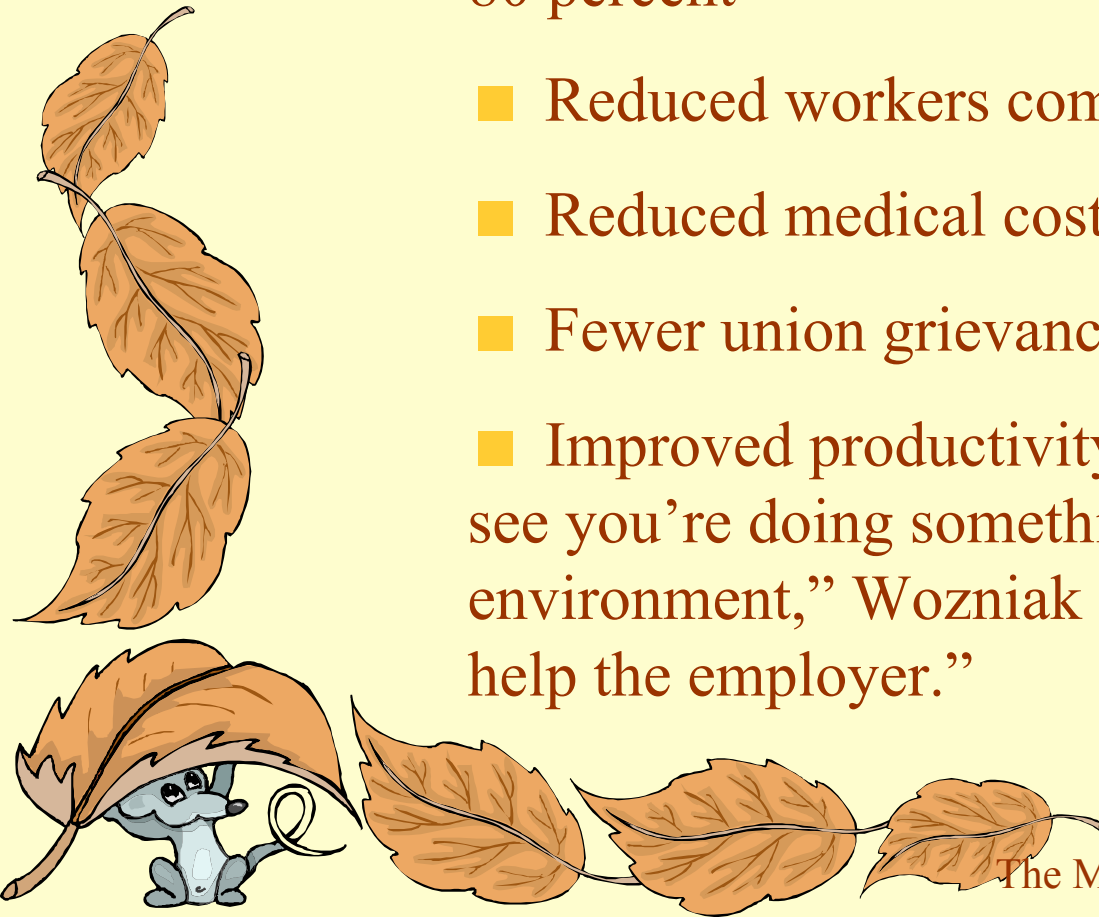
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# POTENTIAL OUTCOMES FOR IMPROVING INDOOR ENVIRONMENTAL QUALITY IN HOSPITALS

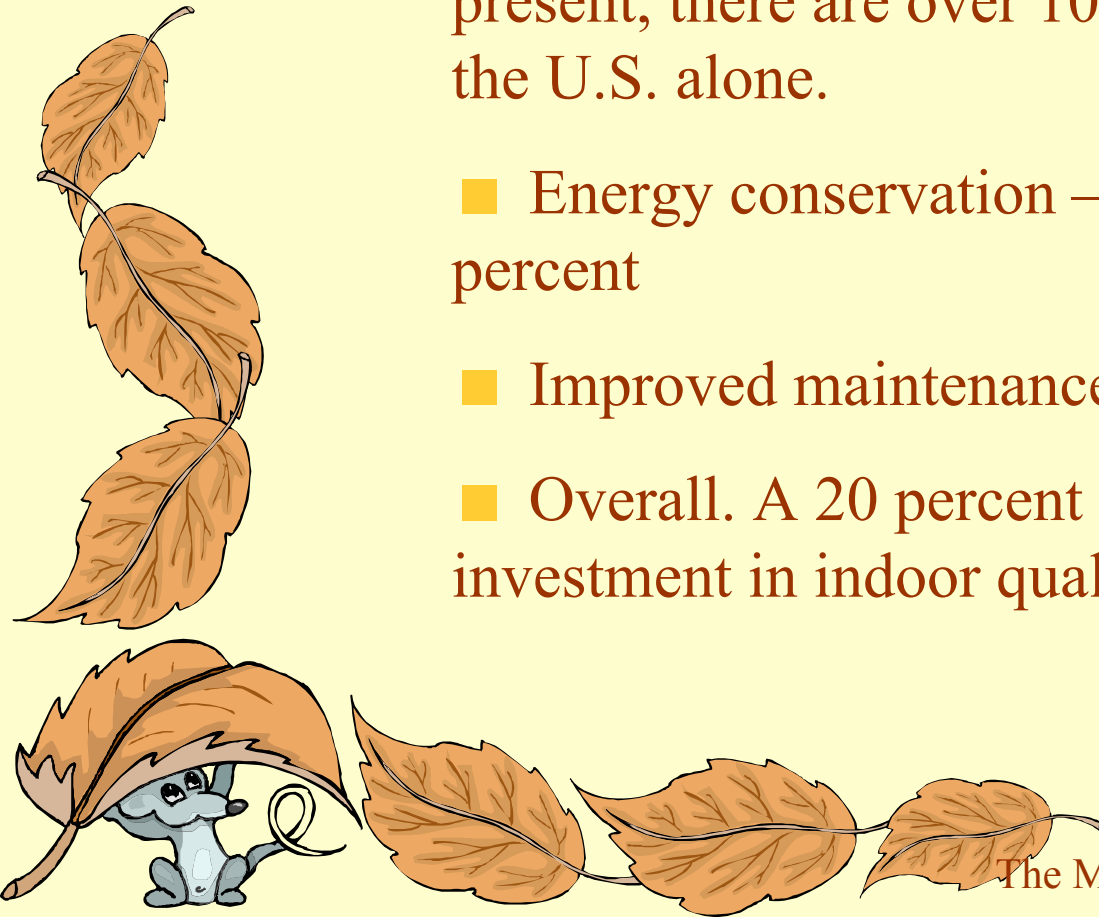
- Reduced absenteeism. In “worst case buildings” the improvement has been as great as 80 percent
- Reduced workers compensation claims
- Reduced medical costs
- Fewer union grievances
- Improved productivity and morale. “If people see you’re doing something to help the environment,” Wozniak said, “they’re going to help the employer.”

Total Indoor Environmental Solutions, Aug 21, 2003, The IEQ Review, online,  
<http://www.imakenews.com>



# POTENTIAL OUTCOMES FOR IMPROVING INDOOR ENVIRONMENTAL QUALITY IN HOSPITALS

- Fewer lawsuits. Wozniak expects indoor air quality lawsuits to become more common. At present, there are over 10,000 mold lawsuits in the U.S. alone.
- Energy conservation – savings up to 30 percent
- Improved maintenance efficiency
- Overall. A 20 percent annual payback on the investment in indoor quality



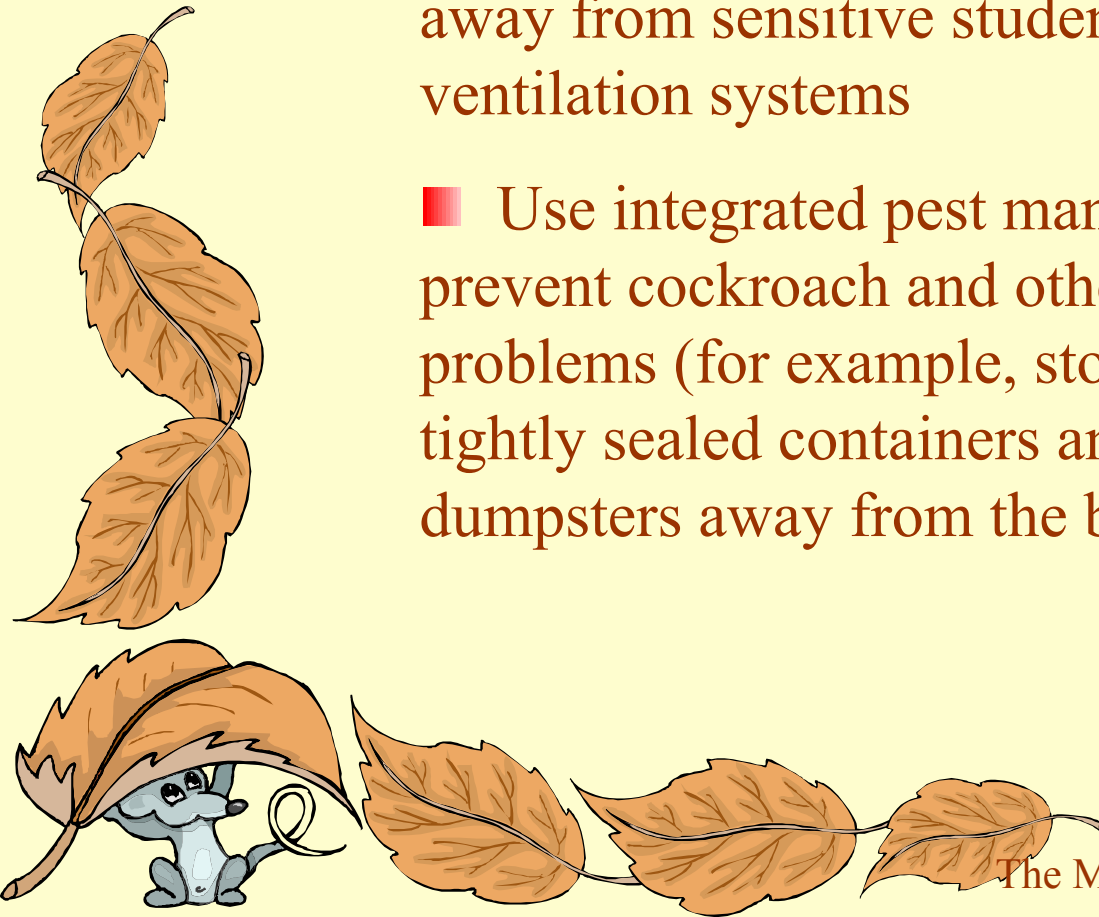
# SUGGESTIONS FOR MAKING RESTROOM HYGIENE A PRIORITY:

- Provide modern tools
- Minimize touch
- Place a high value on training
- Document standards
- Include Professionals
- Involvement from the top



The EPA recommends several actions to help schools improve conditions of their facilities for those with asthma:

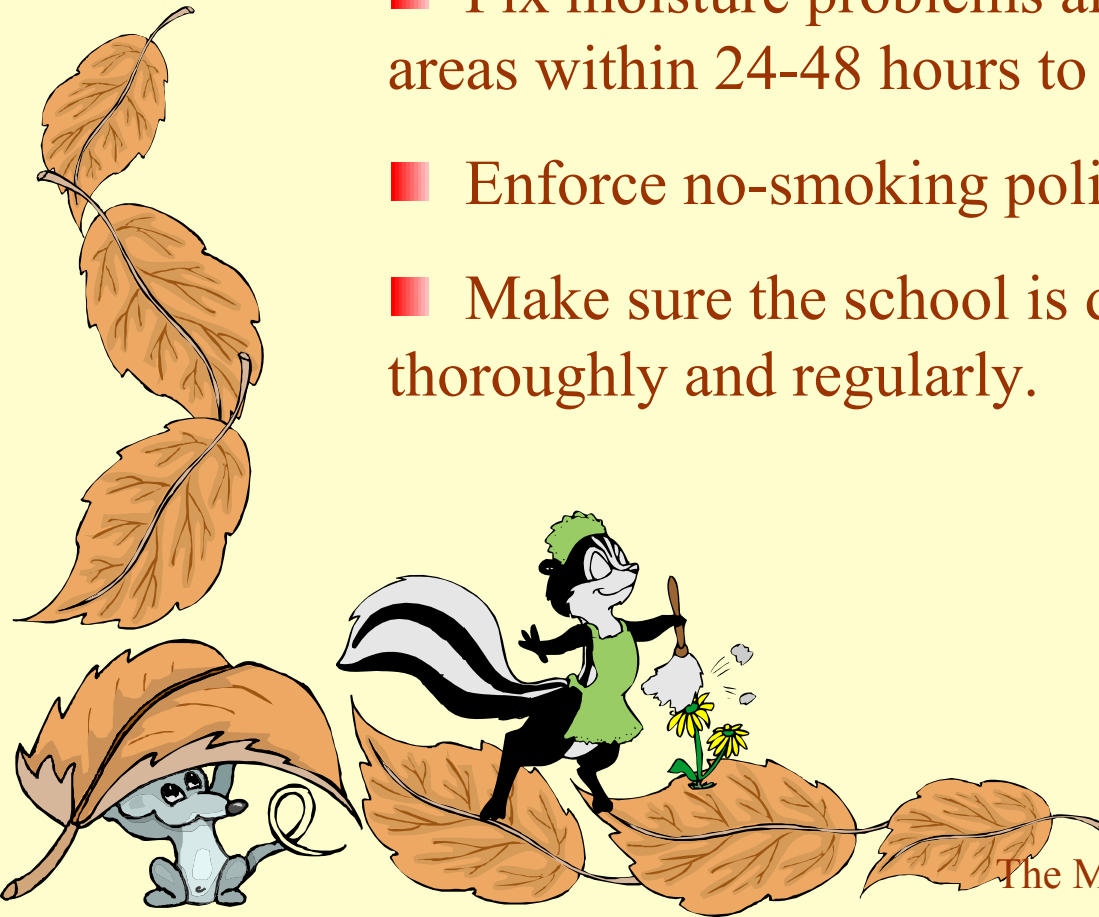
- Remove classroom animals from the school, if possible. If not, place animals away from sensitive students and ventilation systems
- Use integrated pest management to prevent cockroach and other pest problems (for example, store food in tightly sealed containers and place dumpsters away from the building)





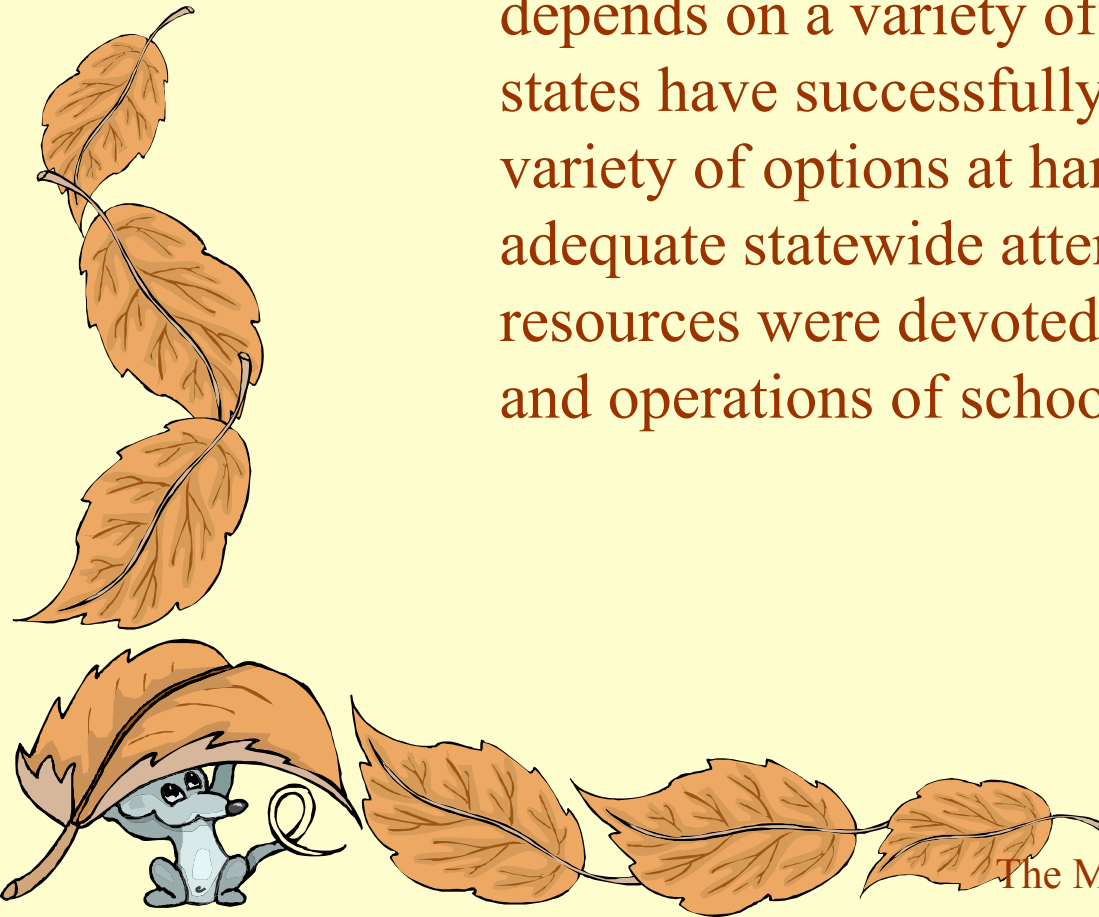
The EPA recommends several actions to help schools improve conditions of their facilities for those with asthma:  
continued

- Fix moisture problems and thoroughly dry wet areas within 24-48 hours to prevent mold growth
- Enforce no-smoking policies
- Make sure the school is dusted and vacuumed thoroughly and regularly.

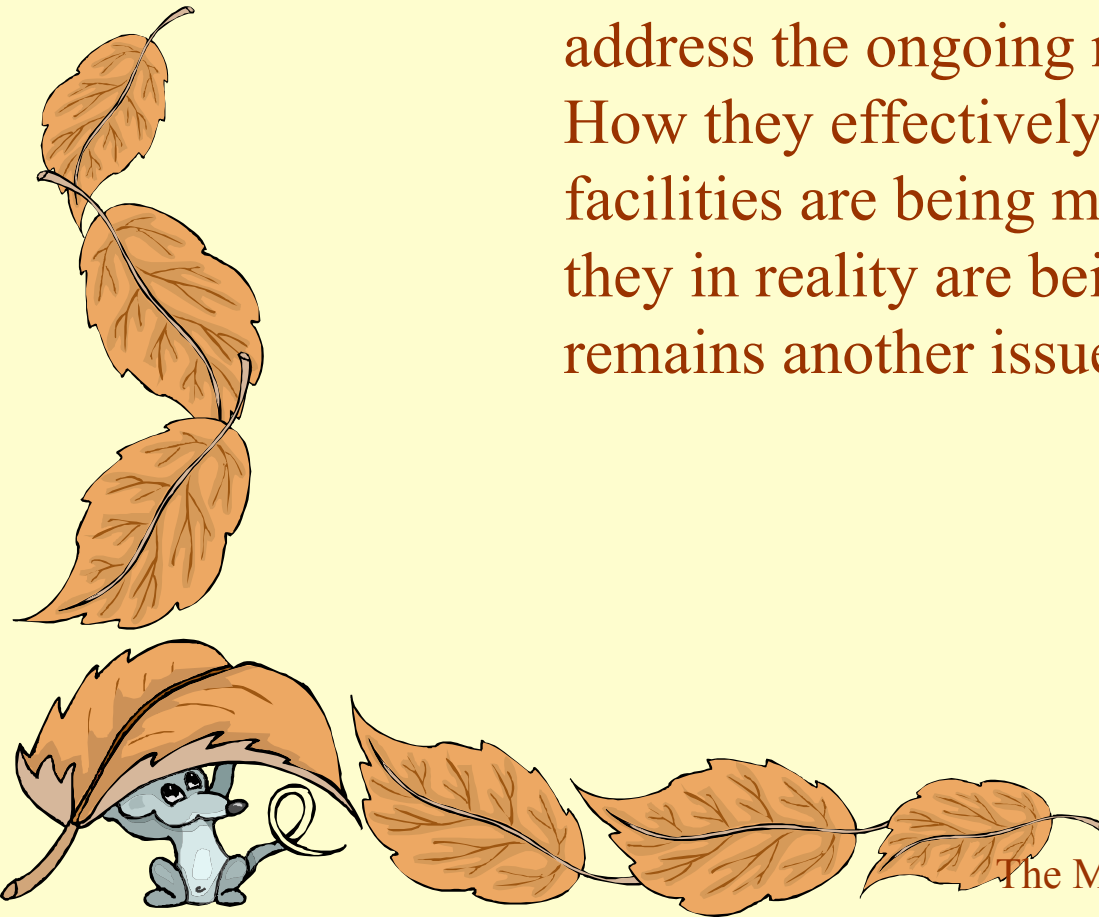




All states confront maintenance and operations issues; the success or failure of a state in handling these issues depends on a variety of factors. Several states have successfully chosen from the variety of options at hand to ensure that adequate statewide attention and resources were devoted to maintenance and operations of school facilities

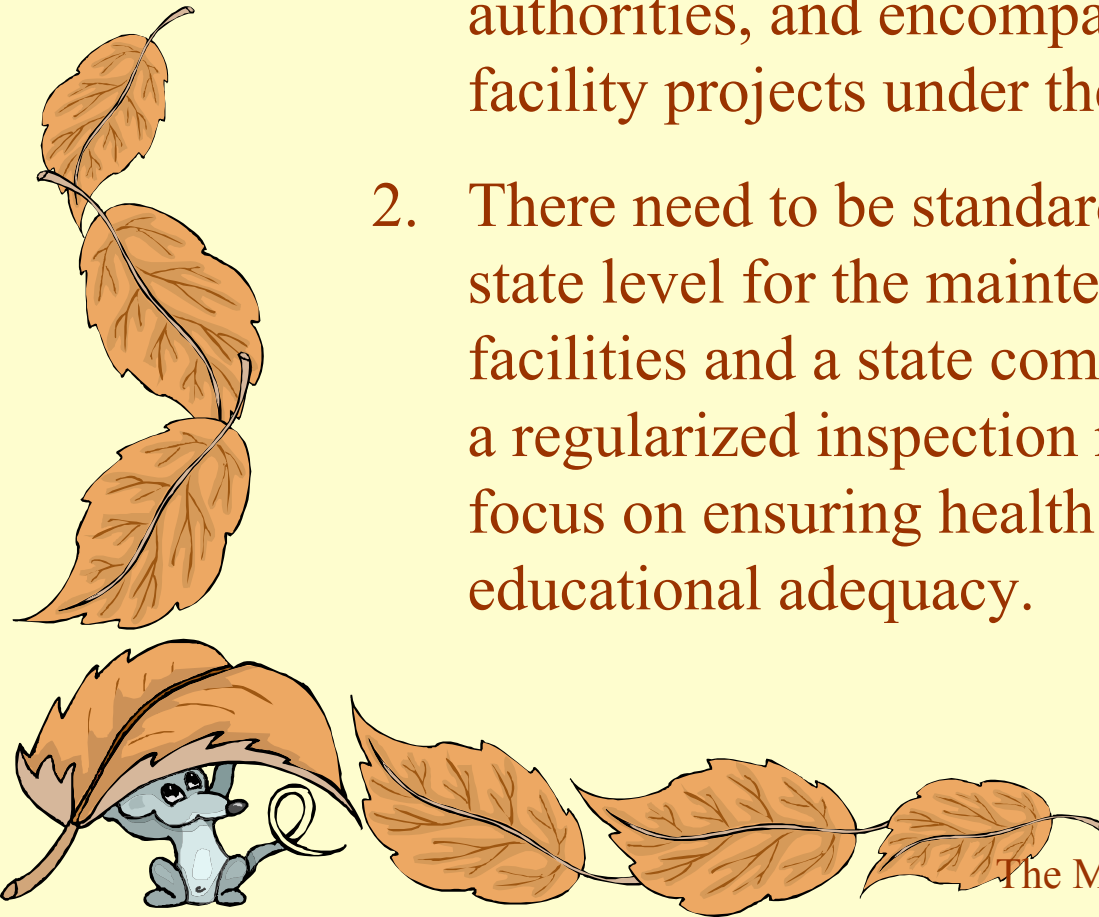


Most states recognize the need for a comprehensive maintenance plan and the need for dollars allocated to address the ongoing maintenance. How they effectively ensure that the facilities are being maintained and if they in reality are being maintained remains another issue.



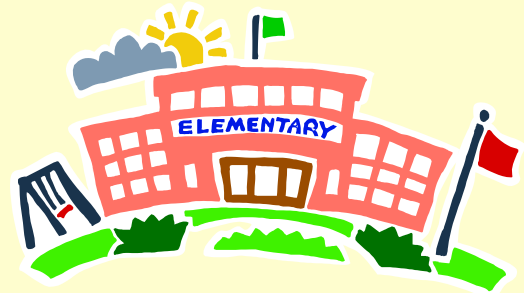
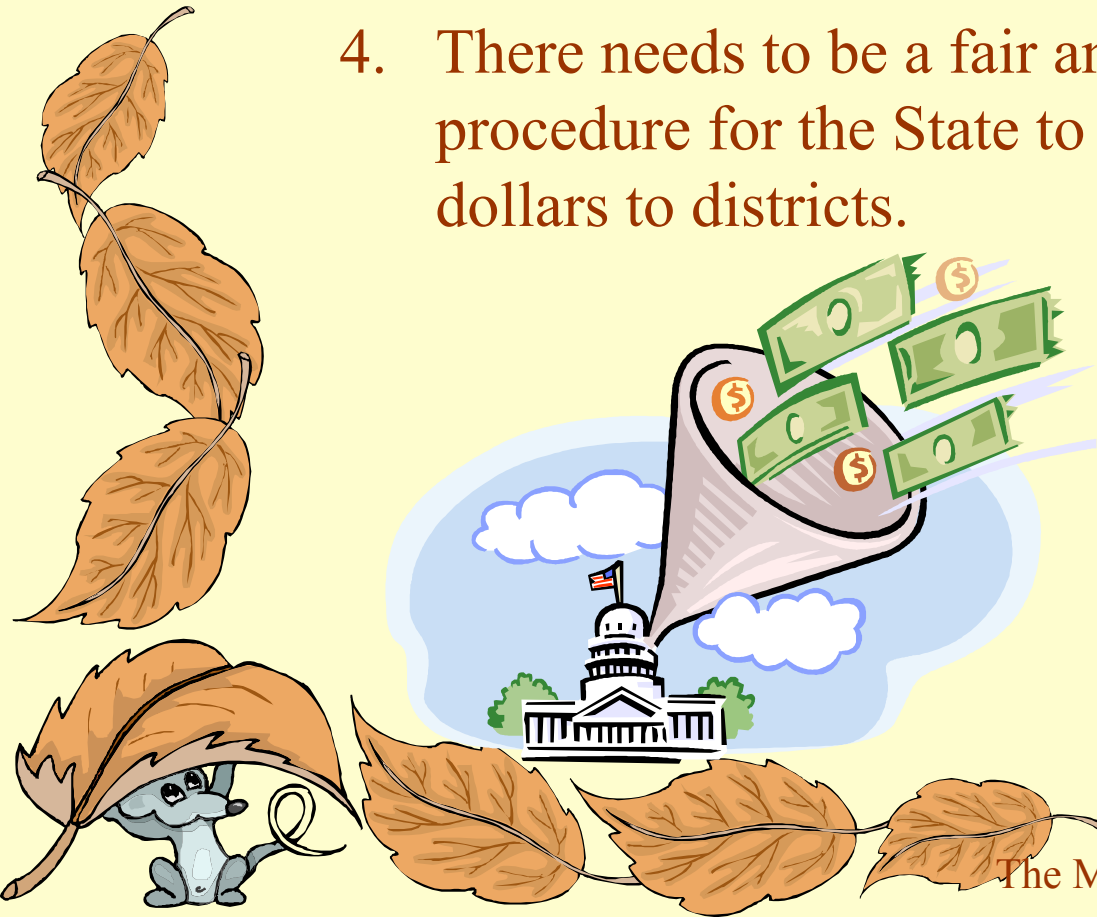
# RECOMMENDATIONS FOR ESTABLISHING A MAINTENANCE AND OPERATION PROGRAM

1. There needs to be a clearly defined organizational structure which incorporates a partnership between State and local district authorities, and encompasses all educational facility projects under the same umbrella
2. There need to be standards imposed at the state level for the maintenance of school facilities and a state compliance program with a regularized inspection regime, which will focus on ensuring health and safety as well as educational adequacy.



# RECOMMENDATIONS FOR ESTABLISHING A MAINTENANCE AND OPERATION PROGRAM

3. States need to establish a data-gathering mechanism regarding the maintenance and operation of school facilities
4. There needs to be a fair and equitable procedure for the State to award facilities dollars to districts.



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